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Does the Experience of Parasocial Interaction Enhance Persuasiveness of Video Public Service Messages?

Sarah F. Rosaen, Jayson L. Dibble, & Tilo Hartmann

Does the experience of parasocial interaction (EPSI) increase the persuasiveness of a video message? In a between-subjects experiment (N = 465) we used bodily addressing to successfully vary EPSI in viewers of three brief video-recorded health messages. This manipulation, however, yielded no significant effect on viewers' perceived persuasiveness of the message and their attitude toward the recommended behavior, and the effect on viewers' felt obligation to comply with the presenter of the message was only marginally significant. However, self-reported EPSI was significantly positively correlated with all persuasion measures, and exploratory analyses yielded significant indirect effects of the manipulation on persuasion via self-reported EPSI. Limitations and implications are discussed.

Keywords: Bodily Address; EPSI; Parasocial Interaction; Persuasion

The *experience of parasocial interaction* (EPSI) is a one-sided sense of felt reciprocity and mutual awareness between a media persona and a viewer (Hartmann & Goldhoorn, 2011). EPSI is a theoretical refinement of earlier work on parasocial interaction (Horton & Wohl, 1956). A perceptual experience of the viewer, EPSI occurs during media consumption and is facilitated best when the media persona looks into the camera and bodily “addresses” the viewer. Television news anchors and late night talk show hosts are prime examples. Essentially, the viewer experiences

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a mind-set while viewing whereby they sense being in a reciprocal social encounter with the media persona, typically accompanied by the sensation that the media persona is even aware of the viewer's presence in the encounter. Of course, this sensation is illusory, which is why theorists refer to EPSI as a one-sided feeling of mutual awareness. Nonetheless, the processes activated during EPSI parallel those that are active during social encounters, leading to the speculation that viewers may experience the parasocial encounter using similar mental machinery as in social encounters (Tukachinsky & Stever, 2018). Thus, researchers are interested in EPSI for its unique potential to organize theoretical development and establish connections between traditional media effects research and social research.

Scholars and practitioners of many stripes have also long been interested in persuasion, especially persuasive video messages. Public service announcements tout messages that discourage smoking, encourage child vaccinations, encourage breast cancer screening, promote healthy eating, and much more. Those who study persuasive messages often focus on features of the message itself: for example, the number and quality of arguments made (e.g., Petty & Cacioppo, 1984); and/or source factors, for example, authority (e.g., Harvey & Hayes, 1972), likeability (e.g., Reinhard & Messner, 2009), and credibility (for a review, see Pornpitakpan, 2004).

Our goal with the current research is to explore the potential for EPSI to facilitate persuasion, considering that EPSI extends persuasion research because it goes farther than message factors and source factors to address an aspect of the *interaction* between the viewer and the messenger (albeit one-sided and imaginary). That is, EPSI's locus (as with non-video mediated social encounters) is in the psychological space established when the video persona looks into the camera and the viewer brings online the faux sense of a social encounter that the media persona is present and is reacting to the viewer. In face-to-face settings, direct looks of a source—as compared to evasive glances—increased compliance with a request (Guéguen & Jacob, 2002), and cues to being watched—like a picture of a pair of eyes—instigated cooperative behavior (Bateson, Nettle, & Roberts, 2006). For example, placing a photo of eyes above a soap dispenser at hospitals increased hand hygiene, as people felt observed and obliged to comply with hygienic standards (e.g., King et al., 2016). Accordingly, eye-gazing and posture of a performer on a screen might instigate similar effects, as they enhance users' illusion of taking part in a real social interaction. To the extent that EPSI does facilitate persuasion outcomes, we therefore refine understanding of social influence and strengthen bridges between media scholarship, interpersonal communication, and, of course, persuasion. On a practical level, message producers can build into their video stimuli production elements that maximize EPSI.

Research Hypothesis

Prior research has shown that EPSI can be induced effectively using bodily addressing (Dibble, Hartmann, & Rosaen, 2016; Hartmann & Goldhoorn, 2011). The

typical manipulation is to use video performers who deliver their message while looking into the camera (high EPSI) or away from the camera (low EPSI). Eye gazing, in particular, is seen as a crucial element for creating a feeling of connection between individuals in face-to-face interactions (Sally, 2000) and, by extension, between audience member and media performer (Hartmann & Goldhoorn, 2011). The sense of mutual gaze also establishes social interaction (Heitanen et al., 2018; Senju & Johnson, 2009) and fosters intimacy and liking (for a review, see Kleinke, 1986)—and people generally prefer to say yes to requestors they know and like (Cialdini, 2009, 2016). Finally, persuasion theorists have long recognized attention and relevance as agents of influence and compliance gaining (e.g., Chaiken, 1980; Petty & Cacioppo, 1986), and indeed, viewers who sense being in a social interaction with the media persona pay closer attention and judge the message to be more personally relevant to them (Heitanen et al., 2018; Myllyneva & Hietanen, 2015). Therefore, in line with these ideas, we hypothesize that messages communicated under conditions evoking high EPSI will be more persuasive than messages communicated under lower EPSI.

Method

Participants

We recruited 682 participants using Amazon's MTurk. We dropped 186 due to not finishing the experiment, not completing the video clip, technical difficulties, or failing to answer a simple math problem, and an additional 31 for failing to identify their experimental condition. This yielded a final sample of 465 (43% female, $M_{\text{age}} = 36.00$, $SD = 11.76$, age range 18–81 years). Ethnic cultural backgrounds were Caucasian 64%, Asian 24%, African American 5%, Hispanic 4%, Native American 1%, Other 2%.

Procedure

We randomly assigned participants to conditions in a 2 (high EPSI/low EPSI) x 2 (previewing and postviewing/postviewing only) x 3 (breakfast/spray tan/e-cigarettes) independent groups experiment. We chose three different health topics and produced persuasive public safety announcement-type videos for each: exercise before breakfast ($n = 146$), avoid spray tanning ($n = 162$), and ban e-cigarettes at work/public places ($n = 157$). All videos featured the same presenter, named "Amy." Following Dibble et al. (2016), we shot each topic using two different cameras simultaneously, from two different angles. In the high EPSI condition, Amy looked into the camera and addressed the viewer ($n = 237$); the low EPSI condition showed Amy in a side profile ($n = 228$). Prior to viewing their assigned video, those participants assigned to the pre-/postviewing condition ($n = 235$) completed the measure of their attitude toward the health topic and once again after viewing. We assigned the remainder ($n = 230$) to complete the attitude measure postviewing only. The other two influence indicators, i.e., perceived persuasiveness and obligation to

comply with Amy, were completed postviewing only. Participants received \$0.90 each for their participation.

Measures

EPSI

We used the six-item Experience of Parasocial Interaction Scale (EPSI Scale, Hartmann & Goldhoorn, 2011) from 1 (*do not agree at all*) to 7 (*totally agree*) ($M = 3.45$, $SD = 1.88$, $\alpha = .95$). Higher scores indicate a stronger feeling of EPSI.

Attitude toward health behavior

We administered a five-item semantic differential attitude toward behavior (health topic) measure (Krosnick, Judd, & Wittenbrink, 2005) before and/or after watching the video (depending on random assignment). This measure employed a 7-point scale anchored by: *useless/useful*, *foolish/wise*, *harmful/beneficial*, *unfavorable/favorable*, and *unnecessary/necessary* (pretest: $M = 5.11$, $SD = 1.78$, $\alpha = .96$; posttest: $M = 5.58$, $SD = 1.74$, $\alpha = .97$). Higher scores indicate more positive attitudes toward the health behavior Amy advocates in the video.

Persuasiveness

We administered a four-item semantic differential perceived persuasiveness measure after viewing the video. This measure, similar to Dillard, Shen, and Vail (2007), assessed how convincing the audience found Amy's argument to be using a 7-point scale that featured the following bipolar terms: *not persuasive/persuasive*, *unconvincing/convincing*, *not effective/effective*, and *incoherent/coherent* ($M = 5.72$, $SD = 1.34$, $\alpha = .92$). This was given postviewing only, and higher scores indicate greater persuasiveness.

Obligation

As an additional indicator of influence, we measured obligation to comply with Amy (e.g. "I somehow felt compelled to comply with what Amy said.") using a five-item, 7-point Likert scale from 1 (*do not agree at all*) to 7 (*totally agree*) ($M = 4.29$, $SD = 1.62$, $\alpha = .83$, Hartmann & Goldhoorn, 2011). Higher scores reflect greater felt obligation to comply.

Results

We first tested the effectiveness of the manipulation in a 2 (EPSI high vs low) x 2 (prepost vs. post only) x 3 (health topic) analysis of variance (ANOVA) with the first two factors as fixed factors, the health topic as random factor (to guard against mono-stimulus bias, see Reeves, Yeykelis, & Cummings, 2016), and EPSI as the dependent variable. Confirming a successful manipulation, this ANOVA yielded

a significant main effect only for the camera-angle manipulation on EPSI, $F(1, 2.00) = 50.04$, $p = .019$; those in the high EPSI condition scored significantly higher on EPSI ($M = 3.87$, $SD = 1.87$) than did those in the low EPSI condition ($M = 3.03$, $SD = 1.80$, $d = 0.46$). Additionally, the videos were themselves successful at increasing a positive attitude toward the health topic with mean comparisons across all health topics showing a significant increase from pre- to posttest at the $p < .001$ level. It was confirmed that all conditions started on equal footing with no significant differences between randomized conditions on the pretest attitude toward the behavior measure. The induction was successful, and the videos were persuasive. Table 1 provides zero-order correlations, means, and standard deviations for all study measures.

To test our hypothesis that messages communicated under conditions evoking high EPSI will be more persuasive than messages communicated under lower EPSI, we ran three separate 2 (EPSI high vs. low) \times 2 (prepost vs. post only) \times 3 (health topic) ANOVAs, one for each dependent variable (perceived persuasiveness, attitude toward the behavior, and obligation to comply with Amy), again with the first two factors as fixed factors and the health topic as a random factor. Contrary to our hypothesis, none of the ANOVAs yielded significant main effects nor interaction effects. However, we observed a main effect of the EPSI factor on obligation to comply that was “marginally significant,” $F(1, 2.05) = 11.05$, $p = .077$, with participants in the “high EPSI” condition reporting a stronger obligation to comply with Amy ($M = 4.36$, $SD = 1.69$) than participants in the “low EPSI” condition ($M = 4.22$, $SD = 1.55$, $d = 0.09$).

Because self-reported EPSI was substantially correlated with the three persuasion outcomes, and particularly participants’ obligation to comply (see Table 1), we ran an additional exploratory analysis using the PROCESS macro (Preacher & Hayes, 2004; model 4). In this analysis we explored potential significant *indirect* effects of the camera-angle manipulation on persuasion via self-reported EPSI. Indeed, all three analyses indicated significant indirect effects of the camera-angle manipulation on persuasion via self-reported EPSI, based on 1,000 bootstrapped estimations of the

Table 1 Zero-Order Correlations, Means, and Standard Deviations for Study Measures

Measure	1	2	3	4	5
1. EPSI	—				
2. Attitude Behavior (pre)	.32*	—			
3. Perceived Persuasiveness	.31*	.48*	—		
4. Attitude Behavior (post)	.25*	.64*	.53*	—	
5. Obligation to Comply	.56*	.29*	.39*	.35*	—
<i>M</i>	3.45	5.11	5.72	5.58	4.29
<i>SD</i>	1.88	1.78	1.34	1.74	1.62

Note. $N = 465$ for all measures, except for the pretest, which is $n = 235$.

* $p < .001$, two-tailed.

unstandardized effect, perceived persuasiveness ($CI_{95} = .11, .29$), attitude ($CI_{95} = .11, .33$), and obligation to comply ($CI_{95} = .25, .59$). The partially standardized effect sizes ranged from .12 to .26. We observed the strongest indirect effect of the camera-angle manipulation via EPSI on participants' felt obligation to comply.

Discussion

In the present study we tested if messages presented by a media performer would be more persuasive if users experience a stronger illusion of being in a real reciprocal social interaction with the performer (EPSI). We successfully manipulated levels of EPSI by varying the body and head posture, and related eye-gaze, of the performer, using different camera angles. However, in the present study, this manipulation did not yield significant effects on persuasion, assessed as viewers' perceived persuasiveness, their attitude toward the advocated behavior, and their obligation to comply with the performer (although we found a "marginally significant" effect for the latter, converging with findings from previous research, e.g., Bateson et al., 2006).

These null-effects are not consistent with an assumption that EPSI affects persuasion. However, an alternative explanation of the null effects might be that, although EPSI does influence persuasion, our study failed to induce a strong enough variation of EPSI to observe effects of the manipulation on persuasion. In other words, it may still be possible that EPSI associates with persuasion even if our induction was too weak because we still found significant and positive zero-order correlations between the self-report measure of EPSI and the persuasion outcomes. In addition, we observed indirect effects of the EPSI manipulation via self-reported EPSI on all three persuasion outcomes. Therefore, although speculative, our data might suggest that participants, under certain circumstances, are indeed more persuaded by a message if they experience stronger EPSI. For example, EPSI might not only be determined by the eye gaze or body position of the media personae but also hinge on user characteristics. For example, perhaps people who encounter an attitude-congruent persuasive message about an issue that they also endorse are more likely to engage in EPSI, which in turn might affect how persuasive the message is on the viewer (see Table 1).

Therefore, we suggest that it might be worthwhile to conduct additional experimental studies in the future to examine further if EPSI affects persuasion, despite the present null effects. Our recommendation is to consider potentially even more powerful manipulations of EPSI in the future—for example, by contrasting a direct body posture and eye gaze of the performer with a condition in which the performer is fully averted (e.g., by turning his or her back to the viewer). Relatedly, we believe that it is worthwhile to examine if EPSI might partly explain why the persuasiveness of an identical message has been shown to vary depending on its presentation or communication mode, e.g., via an audible source versus plain text (e.g., Braverman, 2008). Theorists have argued that observable presenters or sources of a message instigate a social processing mode (Chaiken & Eagly, 1983). EPSI plausibly represents an important characteristic of

how users subjectively experience messages presented by a visible source. Hence, EPSI might plausibly affect users' social processing and, consequently, persuasive outcomes too. In sum, although we were disappointed in the null effects, we believe we had a sound study design given available scholarship on which to build, and the findings that EPSI correlates with persuasion outcomes together with the exploratory indirect effects we observed suggest that it is worthwhile to still gain further empirical insight into the potential role of EPSI in the persuasion process. We are already planning follow-up work to improve our design and continue this line of inquiry.

Disclosure statement

No potential conflict of interest was reported by the authors.

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